IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

Sarvint Technologies, Inc., Plaintiff, v. Sensoria, Inc., Defendant.	Civil Action File No. 1:15-cv-00072-TCB

DECLARATION OF DAVIDE VIGANO

I, Davide Vigano, declare as follows:

1. I am the co-founder and CEO of Sensoria, Inc. My responsibilities at Sensoria include formulating and implementing strategic objectives and operations of the Company, developing and managing partnerships, and ensuring the Company's viability as a commercial entity. Further, I also play a significant role in both early and late stage product development, and I am very familiar with the technical aspects and development of Sensoria's products.

2. I graduated from Università degli Studi di Bergamo with a degree in Economics and Commerce. Since my graduation, I have worked at Microsoft in both Italy and the company's worldwide headquarters in Redmond, WA. During my twenty three years with that company, my responsibilities included multiple

executive sales positions, as well as well as partner level senior executive positions in marketing and product development. Most recently, I served as Microsoft's General Manager of the Health Solutions Group supervising both the consumer and the enterprise product management and marketing. During my time we launched two lines of healthcare products one of which has become the foundation of a joint venture between Microsoft and General Electric called Caradigm. It combines deep expertise in building platforms and ecosystems with complementary experience in clinical and administrative workflow solutions. Delivering an open, interoperable technology platform and innovative clinical applications focused on population health, Caradigm accelerates the shared vision of a connected, patient-centric care system.

FORMATION AND FUNDING OF SENSORIA

3. I founded Sensoria's predecessor company, Heapsylon, LLC in 2010 with my partners Mario Esposito and Maurizio Macagno. Together we founded Heapsylon because we believed we could leverage the convergence of developments in e-textile technologies, the maturation of consumer electronics and the adoption of wearable technologies by consumers to produce commercial products for use in fitness, health, and other areas. Subsequently, we converted Heapsylon, LLC to Sensoria Inc., a Delaware Corporation filed on June 17, 2014,

to unify the company name with our product brand. When I refer to Sensoria, below, I'm referring either to Heapsylon or Sensoria.

4. Mario, Maurizio, and I are all successful former Microsoft technical and business executives. Collectively and individually, we have a history of successful product development and commercialization. For instance, Mario led the tablet team for Bing search that delivered the first experience for the iPad, which won an Apple Industrial Design award. Mario also led the development of a natural user interface (NUI) programming interface for the Xbox One. As part of this effort, Mario designed end-to-end a custom gesture language and a machine-learning based system to detect hand gestures and movements in video games. Similarly, Maurizio led one of the teams that created the cloud computing infrastructure as the foundation for massively used Microsoft Web properties including Xbox LIVE, Xbox.com, Xbox Music and Windows Phone.

5. We chose to center our business in the Pacific Northwest and near Seattle in particular, at least in part, because of this area's access to a large population of sophisticated tech personnel, robust investment activity in tech-related products and industries, and our existing relationships with Microsoft executives and alums and new tech start-ups. There is a robust high tech start-up community in this area, and it seemed that Sensoria would be a natural fit.

6. Obtaining funding for Sensoria has been very challenging. Despite the impressive founders' experiences and reputations, we had significant difficulty in attracting funding. I spent much of my early time at Sensoria identifying potential investors, arranging meetings with them, and preparing for and attending meetings trying to attract investors. In fact, this was essentially my full time job at the beginning of my time with Sensoria. We made countless presentations and had hundreds of conversations with potential investors. Attracting funding was much more difficult than any of us had anticipated, and we spent countless hours on our fundraising endeavors. This is due to the fact that unlike most startups we had to conduct our own research efforts. Most startups focus on development of already existing technology in their R&D plans. And therefore early investors were concerned about the higher level of risk associated with the Sensoria research, development and commercialization plans for its new and innovative products.

7. Initially, the other co-founders and I were required to fund Sensoria ourselves. We also relied on friends and angel investors as an additional source of funding. Our connections to angel investors have been important during the early stages of Sensoria.

8. To secure some external funding and generate awareness of the Sensoria technology and opportunity, in 2013, Sensoria planned and initiated an

Indiegogo campaign. Indiegogo is a crowdfunding website which allows start-up companies, like Sensoria, to raise funds. In exchange for early investment contributions through Indiegogo, contributors selected from a range of Sensoria "perks." The perks were offered in different combinations of smart socks, electronic anklet, smartphone mobile application, cloud-based data repository, and a branded non sensorized t-shirt. As noted by Indiegogo, contributions made during Indiegogo campaigns are distinct from traditional product sales. Other than the branded t-shirt, the "perks" were to-be-developed and did not yet exist as deliverables at the time of the Indiegogo campaign.

9. Sensoria's Indiegogo campaign raised approximately $115,882 and was closed in August, 2013. Approximately 1,100 pairs of socks and 900 anklets were developed, manufactured, and ultimately delivered as perks to campaign funders. These socks and anklets were actually delivered to the Indiegogo contributors in 4th quarter 2014 and 1st half of 2015.

10. While Sensoria raised some funds during the Indiegogo campaign, the cost of developing our products was far greater than the funds actually raised.

11. Sensoria actively promoted its vision, technology and products in many ways, including attendance at industry events and meetings. The founders, and others, have spent significant time and resources promoting the Sensoria

technology through, among other things, attendance at the following events: Wearable Technology Conference in Munich, Germany; Medica in Dusseldorf, Germany; Consumer Electronics Show in Las Vegas; IEEE conference in Baltimore; IDTechEx Wearable Technology Conference in Santa Clara; Smart Fabrics conference in San Francisco; ISPO in Munich, Germany and many others.

12. In spite of these efforts, even after the success of the crowdfunding campaign all of the many venture capital firms contacted were still concerned about the level of risk involved in the R&D of the Sensoria products. After extensive and long-term fund-raising efforts, Sensoria was finally able to obtain a break-through with $5M in funding from Reply SPA, with a Series A term sheet in July, 2014. Reply SPA is a publicly traded company that provides consulting, systems integration and applications management and has headquarters in Turin, Italy.

SENSORIA PRODUCTS

13. I have been and continue to be heavily involved in the development of Sensoria's smart garments. With the funding, Sensoria has been able to hire additional talent such as Drs. Richard Kunze, former INTEL senior electronic engineer, Alick Law, PhD and MBA, Roberto Reif, PhD and Franco Curra, Applied Physics professor for over twenty years at the University of Washington.

The Sensoria team completed initial product development of the Sensoria socks, anklet and fitness mobile application. The team was subsequently able to commercialize those products. Development and commercialization of these products required extensive and continuing research and development over the course of more than four years and required extensive signal processing and electronics expertise.

14. It was only after the significant fundraising efforts, and extensive time and resources spent on research and development, that Sensoria began being recognized with industry awards for our innovation and products. To that end, in the past twelve months, Sensoria has been recognized by multiple industry bodies for its product innovation. These include the Sensoria Fitness smart socks being named a 2015 CES Innovation Awards Honoree for the 1) Wearable Technologies and 2) Sports, Fitness and Biotech categories. CES Innovation Awards are sponsored by the Consumer Electronics Association (CEA)®, the producer of the International CES, and have been recognizing achievements in product design and engineering since 1976. Products entered in the Innovation Awards program are judged by a preeminent panel of independent industrial designers, independent engineers and members of the trade media to honor outstanding design and engineering in cutting edge consumer electronics products. Sensoria was also a

winner of the ISPO Communication Award 2015 in the Mobile App category for the Sensoria Fitness App. As noted by the ISPO organization: ISPO honors the best sporting goods with the ISPO AWARD. A jury consisting of independent sports business professionals evaluates several hundred entries – also from non-exhibitors – following clearly defined criteria. The ISPO Communication Award honors the best creative works, best projects and campaigns in the sports business. Entries were evaluated by an international jury panel of experts from different professions, including journalists, creative, marketing and advertising professionals and designers. An additional recognition for Sensoria came from the Wearable Technologies Innovation World Cup 2015, with the Sensoria Fitness smart socks being named the winner of the Smart Clothing category.

15. In addition to internal product development efforts, Sensoria also worked with vendors to identify other products in the fitness category that would complement the Sensoria socks, anklet and fitness app, and that could be branded with the Sensoria brand. Sensoria worked with ComfTech S.r.l., a company based in Italy that developed e-textile fabrics. The "powered by ComfTech" Sensoria sports bra and t-shirt were designed and manufactured by ComfTech in Italy, with Sensoria being just the exclusive reseller in the United States.

16. During the course of Sensoria's business relationship with Comftech, there were issues with the "powered by ComfTech" sports bras and t-shirts relating to co-branding, supply availability and performance consistency.

17. Accordingly, Sensoria initiated its final order for the "powered by ComfTech" sports bra and t-shirt in April 2014, and Sensoria terminated its relationship with ComfTech in October 2014.

18. It is my understanding that the allegations in Plaintiffs' complaint relate in part to the powered by ComfTech Sports Bra and T-Shirt sold by Sensoria.

19. Sensoria has never made "powered by ComfTech" sports bras and t-shirts in the United States or elsewhere. Sensoria no longer sells or offers for sale any "powered by ComfTech" t-shirts or sports bras in the United States. Sensoria has neither sold nor offered for sale any of these products in the United States since April 9, 2015.

20. Sensoria has no intention of selling the "powered by ComfTech" sports bras and t-shirts in the United States in the future.

THE DEVELOPMENT OF THE SENSORIA SMART SOCKS

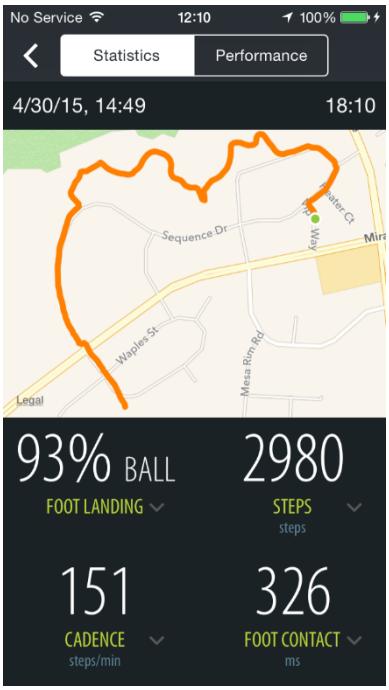
21. Since August 2013, Sensoria has been offering the smart socks and anklet as pre-orders through its online e-commerce Web site. On May 5, 2015,

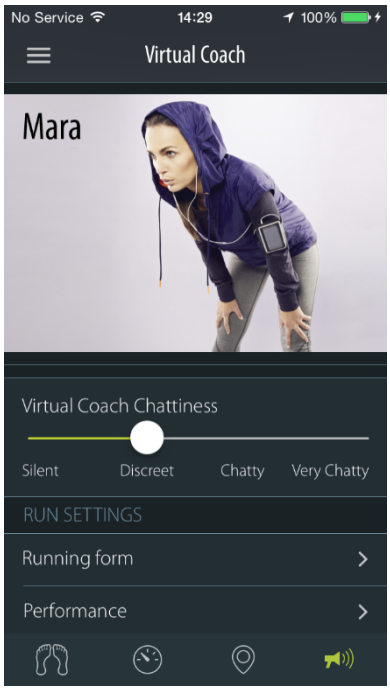
Sensoria announced the general availability of the Sensoria smart socks and anklets, and orders for these products are now being fulfilled.

22. The Sensoria smart socks utilize novel textile sensors provided on three areas at the bottom of the sock to detect pressure and impact forces at these sensor locations, from which we can determine activity level and various other parameters relating to detected pressure and impact forces for runners. The pressure and impact force signals collected from sensor locations on the sock are transmitted from the textile sensor locations on the bottom of the sock to terminals located near the ankle region of the sock, and then to a featherweight, detachable electronic anklet that attaches magnetically to the sock.

23. Signals are transmitted from the anklet, via Bluetooth Smart, to smartphones running the Sensoria Fitness mobile application. The mobile application analyzes pressure and impact force data collected at the textile sensors

and provides real-time monitoring of various parameters important to runners, including cadence and foot landing technique, and provides visual and audio feedback.





Monitoring of these parameters allows runners to modify undesired running technique and could play a role in reducing impact forces and, consequently, recovering from or reducing injury.

24. Sensoria developed its smart socks after extensive research and development and testing, much of which is described below. Our group at Sensoria spent over four years undertaking research and trial and error testing to identify, configure and characterize textile sensors, traces, terminals and analytical techniques. The identification of the pressure and force sensor material, sensor

size, configuration, and placement were all critical to developing Sensoria's technology and the smart socks. Likewise, trace location, pathway, size and termination, the format and location of terminals, and the form factor, location and development of the electronic anklet were also very important in developing the technology.

25. Sensoria would suffer great harm if it were forced to stop selling the smart socks because of an injunction. As discussed above, Sensoria has expended countless hours and significant financial resources developing the smart socks and anklet. Being forced to stop selling these products now—just as Sensoria has begun selling the socks on our website—would cause incredible harm to our business and to the company's livelihood.

THREE KEY FEATURES OF THE SENSORIA SMART SOCKS

A. The Sensors

26. One important feature of the Sensoria smart socks is the pressure sensors. The pressure sensors are comprised of resistive fabric material, which emits signals that can be used to detect pressure and/or force exerted against the sensors. In developing the smart sock's pressure sensors, Sensoria tested many materials to identify suitable textile resistive material(s). We need the material to provide usable signals that could be processed to detect pressure/force exerted

against the sensor, and that could be incorporated into the garment. Additionally, the material must provide reliable signals under different temperature, moisture and other ambient conditions, be comfortably worn against a body during activity, and exhibit durability and washability.

27. Sensoria's textile pressure sensors are fabricated by cutting a woven e-textile fabric that has high resistivity properties to desired sensor shapes. The textile fabric material and Sensoria e-textile pressure sensors are not conductive and could not be used to detect or measure electrical impulses emanating from a skin surface. Resistivity and conductivity properties represent measures of how easily electrons pass through a material. Resistivity indicates how much **friction** electrons encounter as they pass through a material, whereas conductivity indicates how little friction (resistance) electrons experience as they pass through a material – *i.e.*, how easily and quickly electrons pass through a material. Resistive materials present substantial friction and inhibit passage of electrons through the material; conductive materials permit speedy passage of electrons through the material.

28. Sensoria's e-textile pressure sensors are fabricated from fibers made with a blend of nylon and another additive that is coated, after being woven as a fabric, with a resistive coating material. The individual fibers the fabric is woven

from are not individually conductive. Instead, resistive properties are imparted to the individual fibers, and to the woven fabric, after application of the resistive coating to the woven fabric.

29. Sensoria's e-textile pressure sensors, after being cut to desired sensor shapes, are attached to the inside surface of a knitted sock by stitching the woven fabric pieces to the sock. The Sensoria e-textile pressure sensors are not integrated into or woven through the knitted fabric of the sock. Images showing the configuration and placement of Sensoria's e-textile pressure sensors are shown below. The left-hand image shows three Sensoria e-textile fabric pressure sensors sewn onto the bottom, inner surface of the sock. The right-hand image shows an enlarged view of one of the e-textile fabric sensors.

B. The Traces

30. A second key feature of the Smart Socks is the "trace." The Sensoria traces provide signal pathways from the e-textile pressure sensors located on the bottom of the sock to signal transfer terminals located near the cuff of the sock.

31. The Sensoria traces are formed using conductive yarn that is knit into the sock.

32. The conductive yarn of the trace is a completely different material from the e-textile pressure sensors. Importantly, the traces are made from a conductive yarn material; the pressure sensors are made from a resistive woven fabric.

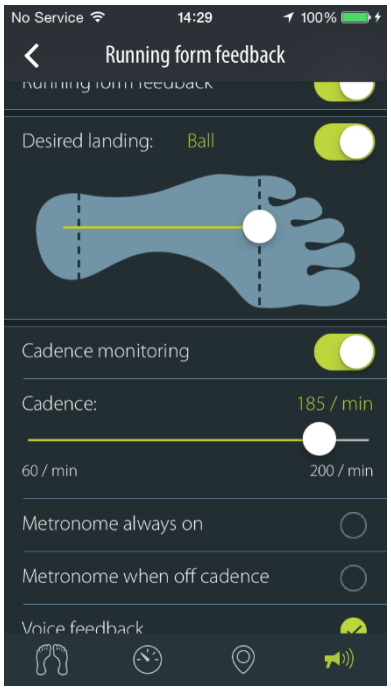
33. In developing the traces, we tested different materials in order to identify conductive material(s) that could: (1) convey signals from a resistive textile sensor to a signal transfer terminal; (2) be incorporated, comfortably, in a garment; and (3) reliably convey signals under different temperature, moisture and other ambient conditions. We also need a product that could be comfortably worn against a body during activity, and which exhibited durability and washability.

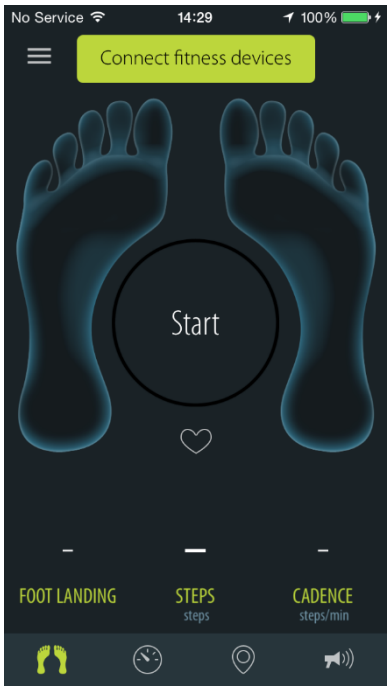
C. Sensoria's Smart Sock Monitoring Features

34. Sensoria's smart socks and anklet were developed to monitor a variety of gait-related parameters.

35. Signals from the e-textile pressure sensors on the bottom of the Sensoria smart sock are conveyed, through the conductive traces, through metallic signal transfer terminals to the electronic anklet, and from there to the Sensoria Fitness mobile application (the "Sensoria App"), which must be installed on the end user's mobile phone.

36. The Sensoria App currently reports the following user activity parameters based on signals received from the Sensoria smart sock: cadence, foot landing location, foot contact time on the ground, and steps taken.





37. The e-textile pressure sensors sewn in the Sensoria smart sock do not and cannot report any vital signs, including heart rate, respiration rate or body temperature. These sensors cannot and do not detect essential body parameters such as pulse, temperature, blood pressure, EKG, or EEG.

38. Developing the mechanical components, hardware and software that are critical to processing and analyzing signals transmitted from the e-textile pressure sensors in the Sensoria smart socks also consumed significant time and resources. For example, the anklet is one of the first consumer electronics products

featuring a truly flexible circuit board design. This feature allows the anklet to flex and accommodate different size ankles. Another example is the magnetic attachment mechanisms serving as the interfaces between terminals on the sock and the anklet to relay data.

Our team has also invested significant time and resources in developing the firmware, mobile app and cloud based software that processes and analyzes the data from the pressure sensors to provide meaningful information for the consumer, and to display that information in an engaging format. The current smart sock, anklet, and mobile application have been optimized for running applications and consumers who are interested in monitoring and improving their running form. These products capture the raw data from the pressure sensors and inform runners about their running form by reporting parameters such as speed, pace, foot landing location, cadence, steps taken and foot contact time on the ground.

THE SENSORIA SMART SOCKS DO NOT HAVE THE SAME ELEMENTS CLAIMED BY THE '731 PATENT

39. Because of my technical background, level of education, and experience with wearable technology, I would consider myself a person of ordinary skill in the art in the context of the '731 Patent.

40. I have reviewed the allegations of infringement of the '731 Patent asserted by Sarvint and I have read the '731 Patent. I understand that Sarvint has alleged the Sensoria smart socks infringe claim 1 of the '731 Patent.

41. There are significant differences between the method recited in Claim 1 of '731 Patent and what the Sensoria smart socks do.

42. I understand that the '731 Patent claims "a method for monitoring vital signs of a subject comprising applying a fabric-based sensor…" I understand that the '731 Patent also consistently states that the fabric-based sensor is used for "monitoring vital signs or other electrical impulses of a subject." '731 Patent, 6:23-24; Abstract. I understand vital signs to have the ordinary meaning of measurements of essential bodily functions such as heart rate, blood pressure, temperature, and respiration rate.

43. The Sensoria smart socks do not measure or monitor any vital signs. Specifically, Sensoria's pressure sensors cannot and do not detect the essential body parameters the fabric-based sensor of the '731 patent is alleged to monitor,

such as blood pressure, respiration rate, pulse, temperature, EKG or EEG. Instead, the Sensoria smart socks detect and monitor force and pressure applied to them, which allow detection and monitoring of certain mechanical parameters such as cadence, and foot landing location rather than vital signs. The Sensoria e-textile sensors are not designed to and are not capable of detecting and measuring electrical impulses or "vital signs."

44. I understand that the '731 Patent also claims "the fabric based sensor comprising: (a) a knitted or woven fully-conductive fabric including one or more individually conductive fibers integrated therein by the process of knitting or weaving the fabric, each conductive fiber being individually conductive prior to incorporation into the fabric in the absence of conductivity imparted to the fabric or to the fibers after incorporation into the fabric." '731 Patent, 6:25-33. The Sensoria smart socks have features completely different than what is claimed in this part of the '731 Patent claim.

45. First, I noticed that the term "fully conductive fibers" is included in Claim 1. However, it does not seem that this term is used or described elsewhere in the '731 Patent. The use of the term fails to inform me, as a person of ordinary skill in the art, about the scope of this part of the invention set forth in the '731 Patent. I don't know what is meant by the term "fully conductive fibers."

46. Further, the Sensoria smart sock e-textile sensors are not made of conductive fabric. Instead, the sensor fabric is resistive.

47. In addition, Sensoria's smart sock sensors are not made from fabric that has fibers described by the language "each conductive fiber being individually conductive prior to incorporation into the fabric in the absence of conductivity imparted to the fabric or the fibers after incorporation into the fabric." As noted above, the e-textile pressure sensors used in the Sensoria smart socks are resistive, not conductive. The individual fibers used in the Sensoria pressure sensors, prior to being woven into fabric, are fibers made from a proprietary blend of nylon and another additive that are non-conductive. After the individual fibers are woven into a fabric, the fabric as a whole is treated with a resistive coating.

48. Further, individual fibers in the e-textile pressure sensors used in the Sensoria smart sock are not "integrated therein by the process of knitting or weaving the fabric...." Neither the individual fibers nor the woven resistive e-textile material forming the Sensoria pressure sensors is integrated into the fabric of the sock. Instead, the Sensoria smart sock sensors are composed of woven resistive fabric patches that are sewn to the inner surface of the knit sock. Thus, instead of an integration of fabric into the sock through weaving or knitting, the

Sensoria smart socks contain three separate patches of resistive e-textile fabric, which are attached – by sewing— to the inner surface of the sock.

49. Finally, I understand that the '731 Patent claims the sensor also comprising "an electrical lead for connection to a connector, the electrical lead being formed from one of the integrated individually conductive fibers." '731 Patent 6:34-36. The Sensoria smart socks do not contain any such electrical lead. The electrical lead (what Sensoria refers to as the "trace") that connects each of the Sensoria pressure sensors to a terminal is not formed from one of the fibers that forms the Sensoria e-textile sensor. The Sensoria e-textile pressure sensors are made from one material (woven, resistive material), and the traces provided in the Sensoria smart socks are made from a completely different type of material (conductive yarn). The traces —and only the traces, not the sensors — are fabricated from conductive yarn that is knit into the sock.

50. It is my understanding that individuals associated with Sarvint attempted to order Sensoria's products on at least five occasions from November 2014 to April 2015 through Sensoria's online e-commerce Web site. These orders included the Sensoria Fitness smart sock, electronic anklet, Heart Rate Monitor, and t-shirt powered by ComfTech. A t-shirt powered by ComfTech was shipped in

November 2014 to their counsel. No Sensoria smart socks or anklet or sports bra were shipped.

COMPETITORS IN THE MARKETPLACE

51. It is my understanding that there are a number of other competitors, who sell products with features that appear to be similar to the technology embodied in the '731 Patent" For example:

- GOW Women's M1 Sports Bra with integrated textile sensors[1]
- Sensilk Flight Tech Bra[2]
- Polar Cardio Sports Bra[3]
- PureLime Intelligent Sports Bra with Heart Rate Sensors[4]

MEDIA COVERAGE FOR SENSORIA'S TECHNOLOGY

52. In addition to the industry awards discussed above, Sensoria has received significant press coverage recently regarding its smart sock technology. For example, as it was recently explained, "The Sensoria Smart Sock, for instance, has helped teach me how to run on the ball of my foot, so I don't wake up the next day hobbling on a damaged heel. It has an automated audio coach that whispers instructions in your ear as you run." Gregory Ferenstein, Why The Apple Watch Is A Big Nothingburger For Fitness, *available at* http://readwrite.com/2015/04/30/apple-watch-fitness-no-good.

[1] http://www.amazon.com/GOW-Womens-M1-Sports-Bra/dp/B00FU41QZ4
[2] http://sensilk.com/product/sensilk-smart-bra-alpha/
[3] http://www.amazon.com/Polar-Cardio-Sports-Bra/dp/B001RIIITE
[4] http://www.amazon.com/Intelligent-Sports-Heart-Sensors-00-96/dp/B005EPO6NI

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 13 day of May, 2015.

Davide Vigano